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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/995,362	11/27/2001	Shlomo Novotny	2442/120	9021

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EXAMINER	
CIRIC, LJILJANA V	
ART UNIT	**PAPER NUMBER**
3753	9

DATE MAILED: 11/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/995,362	Applicant(s) Novotny et al.
	Examiner Ljiljana V. Ciric LVC	Art Unit 3753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *Jul 29, 2003*.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-54* is/are pending in the application.

4a) Of the above, claim(s) *14, 15, 25, 26, 36-41, and 45-54* is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-13, 16-24, 27-35, and 42-44* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) ☒ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on *Nov 27, 2001* is/are a) ☒ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). *3,7*
4) ☐ Interview Summary (PTO-413) Paper No(s). _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Election/Restriction

1. Applicant's election without traverse of the first species corresponding to the embodiment of Figures 3 through 5, readable on claims 1 through 13, 16 through 24, 27 through 35, and 42 through 44, in Paper No. 8, is acknowledged.

2. Claims 14, 15, 25, 26, 36 through 41, and 45 through 54 are hereby withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to non-elected inventions, there being no allowable generic or linking claim. Election was made without traverse in Paper No. 8.

Specification

3. The disclosure is objected to because of the following informalities: the term "IU enclosure" [page 1, line 24; page 11, line 9; and other occurrences] is not understood. It is not clear, for example, whether this term is merely a misspelling of the term "IC enclosure" or whether this term represents a newly coined (but not defined) term. [Note that the term "IU enclosure" also appears in some of the non-elected, and thus non-examined, claims.]

Appropriate correction is required.

Claim Rejections - 35 U.S.C. § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 35 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "low" in claim 35 is a relative term which renders the claim indefinite. The term "low" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Thus, as used to qualify the profile of the system, this term renders the configuration of the profile indeterminate and the claim indefinite. Also, note that the limitation "the low profile system" appearing in line 1 of claim 35 fails to have proper antecedent basis either in claim 35 or in claim 27 from which claim 35 depends.

Claim Rejections - 35 U.S.C. § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1 through 4, 6 through 12, and 16 through 23 are rejected under 35 U.S.C. 102(b) as being anticipated by *Nelson ('802, of record)*

Nelson discloses a system for cooling electronic components essentially as claimed, including, for example: a surface or circuit board having one or more electronic components or microprocessors 415 and 420 coupled thereto (see Figure 4); a blower 110 (indirectly) coupled to

the surface via first air duct 120 (see Figure 1, for example), the blower having a first port or air intake 135 (also see Figure 1); and, a heat sink 430 or 425 (see Figure 4, for example). The first air duct 120 is broadly readable, as required, on the shroud as recited in each of claims 12 and 23 of the instant application, for example. Air intake 135 is also alternately readable on the second port as recited in claims 4 and 9 of the instant application, with the other blower port being readable on the first port as recited in these claims. Each of the ports of the blower 110 (as shown in Figure 1, for example) is disclosed as "facing" the surface or in the direction of the surface, as broadly interpreted as required.

The reference thus reads on the claims.

8. Alternately, claims 16 through 20 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by *Lin*

Lin discloses a system for cooling electronic components essentially as claimed, including, for example: a surface or circuit board having at least one electronic component such as CPU 31 coupled thereto (see Figure 2 and column 2, lines 49-61), the at least one electronic component or CPU 31 being in contact with a heat sink or base 21; a blower or fan 22 having two ports, one of which is opening 231; and, an air guiding tube or shroud 24.

The reference thus reads on the claims.

9. Alternately, claims 1 through 4, 6 through 12, 16 through 23, 27 through 34, and 42 through 44 are rejected under 35 U.S.C. 102(b) as being anticipated by *Konstad et al.*

Konstad et al. discloses a system and corresponding method for cooling electronic components essentially as claimed, including, for example: a surface or circuit board or motherboard 100 or 300 to which one or more electronic components or memory cards 101, 106, and 107 (see Figure 1) or 301 (see Figure 4) are coupled, where the memory cards may include a heat sink (see column 4, lines 23-28); and, a blower 103 or 303 coupled to the surface or circuit board or motherboard; the blower 103 or 303 having two ports. Duct 104 is readable on the shroud as recited in each of claims 12 and 23 of the instant application. The frame-type portion of bracket 304 surrounding fan or blower 303 (see Figure 4, for example) is broadly readable as required on the shroud as recited in claim 34 of the instant application. The embodiment of Figures 3 and 4 discloses the impeller of the fan or blower 303 as having an axis which is perpendicular to the surface or circuit board or motherboard 300 and non-intersecting (i.e., parallel) with the plane of the memory cards 301 and any heat sinks included thereon (see column 4, lines 23-28) as recited in each of base claims 27 and 42 of the instant application. The embodiment of Figures 1 and 2 discloses at least one airflow path that is parallel to the plane of the surface or circuit board or motherboard 100 as recited in claims 10 and 16 of the instant invention, for example.

The reference thus reads on the claims.

Claim Rejections - 35 U.S.C. § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claims 5, 13, 24, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Konstad et al.*

As described in greater detail above, *Konstad et al.* discloses a system for cooling electronic components essentially as claimed, including various miniaturized elements of the system having dimensions which have an order of magnitude of under an inch (see column 3, lines 55-64).

While *Konstad et al.* does not explicitly disclose the height of the system as being under 1.75" as recited in claims 5, 13, 24, and 35 of the instant application, it is conceivable that a system comprising only a few elements, wherein the elements are sized 0.2 inches and 0.6 inches as disclosed by *Konstad et al.* will likely have a cumulative height of under 1.75" or not much over this value. Furthermore, changes in size, absent unexpected results, are generally not sufficient to establish patentability. See *In re Rose*, 220 F.2d 459, 105 USPQ 237 (CCPA 1955).

Thus, it would have been obvious to one skilled in the art at the time of invention to modify the system of *Konstad et al.* by keeping the height of the system under 1.75" in order to minimize the size of the whole electronic system within the which the cooling system is installed.

Double Patenting

12. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

13. Claims 1 through 9 and 13 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 through 4, 11, 13, and 14 of U.S. Patent No. 6,438,984 B1. Although the conflicting claims are not identical, they are not

patentably distinct from each other because one of the two only differences is that the claims of U.S. Patent No. 6,438,984 B1 additionally recite a closed-loop refrigeration circuit. Nevertheless, absent unexpected results, eliminating an element and its function is obvious. See *In re Larson*, 340 F.2d 965, 144 USPQ 347 (CCPA 1965) and *In re Kuhle*, 526 F.2d 553, 188 USPQ 7 (CCPA 1975). The other difference is that the claims of U.S. Patent No. 6,438,984 B1 fail to recite a specific height for the cooling system as recited in claim 13 of the instant application, but, absent unexpected results, changes in size are also obvious. See *In re Rose*, 220 F.2d 459, 105 USPQ 237 (CCPA 1955).

14. Claims 1 through 13, 16 through 24, 27 through 35, and 42 through 44 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 through 4, 9, 11 through 13, 15, 17 through 20, 25, 26, 28, and 29 of U.S. Patent No. 6,587,343 B2. Although the conflicting claims are not identical, they are not patentably distinct from each other because the only difference is that the claims of U.S. Patent No. 6,587,343 B2 recite a closed-loop fluidic circuit coupled to the surface for removing heat whereas the claims of the instant application instead recite a heat sink coupled to the surface for removing heat. Nevertheless, Official Notice is taken hereby that heat sinks and closed-loop fluidic circuits are well-known alternatives for enhancing heat transfer within an electronic cooling system.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. *Ko et al., Yokozawa et al., Okochi et al., Kodaira et al., Chen,* and *Koizumi* each discloses an electronic cooling system including at least a fan or blower and a heat sink.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ljiljana (Lil) V. Ciric, whose telephone number is (703) 308-3925.

While she works a flexible schedule that varies from day to day and from week to week, Examiner Ciric may generally be reached at the Office during the work week between the hours of 10 a.m. and 6 p.m. ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Scherbel, can be reached on (703) 308-1272.

The NEW central official fax phone number is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0861.

lvc

October 17, 2003

LJILJANA V. CIRIC
PRIMARY EXAMINER
ART UNIT 3753